

Mr. D. G. Wonnell  
United States Gypsum Company  
P.O. Box 1377  
Shoals, IN 47581

Re: 101-11293  
First Administrative Amendment to  
**Part 70 101-7691-00001**

Dear Mr. Wonnell:

United States Gypsum Company was issued a permit on May 24, 1999 for a gypsum mining operation and a gypsum wallboard and plaster products manufacturing plant. A letter requesting that the significant source modification 131-11204 be incorporated into the Part 70 permit was received on August 5, 1999. Pursuant to the provisions of 2-7-11 the permit is hereby administratively amended as follows (with new language bolded and old language stricken). These changes were approved to construct under SSM 101-11204-00001.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (ee) **One (1) calcining kettle, identified as #1 MBR Kettle, with a maximum throughput of 35.2 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 1, and exhausting to one (1) stack, identified as S-1.**
- ~~(ee) One (1) calcining kettle, identified as Kettle #1, with a maximum throughput of 12 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 1, and exhausting to one (1) stack, identified as S-1.~~
- (ff) **Three (3) natural gas-fired kettle burners, identified as #1 MBR Kettle Burners, each with a heat input capacity of 5 million Btu per hour, and exhausting to one (1) stack, identified as S-41.**
- ~~(ff) One (1) natural gas or fuel oil-fired kettle burner, identified as Burner #1, with a heat input capacity of 12 million Btu per hour, and exhausting to one (1) stack, identified as S-41.~~
- (gg) **One (1) hot pit, identified as Hot Pit #1, with a maximum throughput of 35.2 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 6, and exhausting to one (1) stack, identified as S-6.**
- ~~(gg) One (1) hot pit, identified as Hot Pit #1, with a maximum throughput of 12 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 6, and exhausting to one (1) stack, identified as S-6.~~

**D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]**

The particulate matter emissions from the primary and secondary crushers shall not exceed 0.29 and 6.22 pounds per hour, respectively. Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

**D.2.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]**

The particulate matter emissions from the screening, crushing and loading operations shall not exceed 0.147, 1.10 and 0.020 pounds per hour, respectively. Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

**SECTION D.6 FACILITY OPERATION CONDITIONS**

Facility Description [326 IAC 2-7-5(15)]

The following stucco production facilities:

- (ee) One (1) calcining kettle, identified as #1 MBR Kettle, with a maximum throughput of 35.2 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 1, and exhausting to one (1) stack, identified as S-1.**
- ~~(ee) One (1) calcining kettle, identified as Kettle #1, with a maximum throughput of 12 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 1, and exhausting to one (1) stack, identified as S-1.~~
- (ff) Three (3) natural gas-fired kettle burners, identified as #1 MBR Kettle Burners, each with a heat input capacity of 5 million Btu per hour, and exhausting to one (1) stack, identified as S-41.**
- ~~(ff) One (1) natural gas or fuel oil-fired kettle burner, identified as Burner #1, with a heat input capacity of 12 million Btu per hour, and exhausting to one (1) stack, identified as S-41.~~
- (gg) One (1) hot pit, identified as Hot Pit #1, with a maximum throughput of 35.2 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 6, and exhausting to one (1) stack, identified as S-6.**
- ~~(gg) One (1) hot pit, identified as Hot Pit #1, with a maximum throughput of 12 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 6, and exhausting to one (1) stack, identified as S-6.~~

**D.6.2 Particulate Matter (PM) [326 IAC 6-3]**

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the stucco production facilities shall not exceed **52.3** ~~50~~ pounds per hour when operating at a process weight rate of **110.7** ~~87.5~~ tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

**D.6.4 New Source Performance Standard [326 IAC 12] [40CFR 60, Subpart UUU]**

(a) Pursuant to 40 CFR 60, Subpart UUU (Standards of Performance for Calciners and Dryers in Mineral Industries), the #1 MKB Calcining Kettle shall meet the following requirements:

- (1) Particulate matter (PM) emissions from the #1 MKB Calcining Kettle stack (S-1) shall not exceed 0.040 grains per standard cubic foot.
- (2) Opacity from the #1 MKB Calcining Kettle stack (S-1) shall not exceed ten percent (10%).
- (3) The #1 MKB Calcining Kettle shall be subject to the emission limitations set forth in this condition on or after the date of the initial performance test is completed, but no later than 180 days after the initial startup, whichever comes first.

(b) Calcining kettles #2, #3, #4, and #5 are not subject to this rule because they were constructed and modified prior to April 23, 1986.

**~~D.6.5~~ D.6.6 Testing Requirements [326 IAC 2-7-6(1),(6)]**

(a) ~~The Permittee shall conduct performance tests required by 40 CFR 60.8, and shall determine compliance according to the methods and procedures specified in 40 CFR 60.736.~~

(b) Compliance testing for PM from the #1 MKB Calcining Kettle shall be performed within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed in accordance with Section C - Performance Testing and 40CFR 60.736.

(c) The Permittee is not required to test ~~the remaining stucco production~~ ~~these~~ facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facilities are in compliance. If testing is required by IDEM, compliance with the PM and SO<sub>2</sub> limits specified in Conditions D.6.1, D.6.2, D 6.3 and **D.6.4** shall be determined by performance test(s) conducted in accordance with Section C - Performance Testing, **and testing shall be done simultaneously at all emission points.**

~~D.6.12~~ **D.6.13** Record Keeping Requirements

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- (a) To document compliance with Conditions D.6.1(b), D.6.3 and ~~D.6.7~~ ~~D.6.6~~, the Permittee shall maintain records in accordance with (1) through (8) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the emission limit established in D.6.1(b) and D.6.3.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel oil usage since last compliance determination period;
- (3) Sulfur content and heat content;
- (4) Sulfur dioxide emission rates.
- (5) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance with the sulfur content limit, the following, as a minimum, shall be maintained:

- (6) Fuel supplier certifications;
- (7) The name of the fuel supplier; and
- (8) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

- (b) To document compliance with Condition ~~D.6.9~~ ~~D.6.8~~, the Permittee shall maintain records of daily visible emission notations of the stucco production stack exhausts.

- (c) To document compliance with Condition ~~D.6.10~~ ~~D.6.9~~, the Permittee shall maintain the following:

- (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
  - (A) Inlet and outlet differential static pressure; and
  - (B) Cleaning cycle: frequency and differential pressure.
- (2) Documentation of all response steps implemented, per event.
- (3) Operation and preventive maintenance logs, including work purchase orders, shall be maintained.
- (4) Quality Assurance/Quality Control (QA/QC) procedures.
- (5) Operator standard operating procedures (SOP).
- (6) Manufacturer's specifications or its equivalent.
- (7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(d) ~~(e)~~ To document compliance with Condition **D.6.11** ~~D.6.10~~, the Permittee shall maintain records of the results of the inspections required under Condition **D.6.11** ~~D.6.10~~.

(e) ~~(d)~~ All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

~~D.6.13~~ **D.6.14** Reporting Requirements

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(a) A quarterly summary of the information to document compliance with Conditions D.6.1(b) and D.6.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported.

(b) To document compliance with Condition **D.6.9** ~~D.6.8~~, the Permittee shall certify, on the form provided, that natural gas was fired in the kettle burners #1 through #4 at all times during the report period. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during the report period. The form shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported.

Operation of the new equipment incorporated into the Part 70 operating permit by this amendment may commence operation upon issuance of this approval. This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Patrick T. Brennan, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 516-691-3395 or in Indiana at 1-800-451-6027 (ext 516-691-3395).

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

Attachments  
PTB/MES

cc: File - Martin County  
U.S. EPA, Region V  
Martin County Health Department  
Air Compliance Section Inspector - Gene Kelso  
Compliance Data Section - Karen Nowak  
Administrative and Development - Janet Mobley  
Technical Support and Modeling - Michele Boner

# **PART 70 OPERATING PERMIT OFFICE OF AIR MANAGEMENT**

**United States Gypsum Company  
State Road 650  
Shoals, Indiana 47581**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T101-7691-00001	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date:
First Significant Source Modification 101-11204	Pages Affected: 5, 10, 11, 38, 39, 40, 41, 52, 54, 54a, 55, 56, 57
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:
First Administrative Amendment 101-11293	Pages Affected: 5, 10, 11, 38, 39, 40, 41, 52, 54, 54a, 55, 56, 57
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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- D.10.9 Parametric Monitoring
- D.10.10 Baghouse Inspections
- D.10.11 Broken or Failed Bag Detection

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

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**D.11 FACILITY OPERATION CONDITIONS - Dunnage Machine and Waste Wallboard**

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- D.11.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]
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- D.11.3 Particulate Matter (PM) [326 IAC 6-3]
- D.11.4 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1]
- D.11.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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- D.11.6 Testing Requirements [326 IAC 2-7-6(1),(6)]
- D.11.7 Sulfur Dioxide Emissions and Sulfur Content<sup>78</sup>
- D.11.8 Particulate Matter (PM)

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

- D.11.9 Visible Emissions Notations
- D.11.10 Parametric Monitoring
- D.11.11 Baghouse Inspections
- D.11.12 Broken or Failed Bag Detection

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

- D.11.13 Record Keeping Requirements
- D.11.14 Reporting Requirements

**D.12 FACILITY OPERATION CONDITIONS - Insignificant Activities**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

- D.12.1 Particulate Matter (PM) [326 IAC 6-3]

**Compliance Determination Requirements**

- D.12.2 Testing Requirements [326 IAC 2-7-6(1),(6)]

**Certification**

**Emergency/Deviation Occurrence Report**

**Natural Gas Fired Boiler Certification**

**Quarterly Report**

**Quarterly Compliance Monitoring Report**

- (t) One (1) mill packing system, with a maximum throughput of 10 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 40, and exhausting to one (1) stack, identified as S-40.

The following landplaster production facilities:

- (u) A conveying system, consisting of screw conveyors and pneumatic conveyors, with particulate matter emissions controlled by two (2) baghouses, identified as emissions points 11 and 12, and exhausting to two (2) stacks, identified as S-11 and S-12, respectively. Some portions of the conveyor system are controlled by partial or total enclosure and exhaust to associated processes.
- (v) Two (2) Raymond grinding mills, identified as Mills #1 and 2, each with a maximum throughput of 37 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 11, and exhausting to one (1) stack, identified as S-11.
- (w) Two (2) Raymond grinding mills, identified as Mills #3 and 4, each with a maximum throughput of 37 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 12, and exhausting to one (1) stack, identified as S-12.
- (x) One (1) landplaster airveyor bin, with a capacity of 2 tons, with particulate matter emissions uncontrolled, and exhausting inside the building.
- (y) One (1) landplaster bin, with a capacity of 7 tons, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 36, and exhausting to one (1) stack, identified as S-36.

The following stucco production facilities:

- (z) A conveying system, consisting of screw conveyors, with particulate matter emissions controlled by partial enclosure, and exhausting to associated processes or inside the building.
- (aa) One (1) landplaster filter box, with a maximum throughput of 10 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 26, and exhausting to one (1) stack, identified as S-26.
- (bb) One (1) landplaster fines receiving system, with a maximum throughput of 6 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 48, and exhausting to one (1) stack, identified as S-52.
- (cc) Four (4) kettle feed bins, each with a capacity of 60 tons, with particulate matter uncontrolled, and exhausting inside the building.
- (dd) One (1) kettle feed bins, with a capacity of 100 tons, with particulate matter uncontrolled, and exhausting inside the building.
- (ee) One (1) calcining kettle, identified as #1 MBR Kettle, with a maximum throughput of 35.2 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 1, and exhausting to one (1) stack, identified as S-1.

- (ff) Three (3) natural gas-fired kettle burners, identified as #1 MBR Kettle Burners, each with a heat input capacity of 5 million Btu per hour, and exhausting to one (1) stack, identified as S-41.
- (gg) One (1) hot pit, identified as Hot Pit #1, with a maximum throughput of 35.2 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 6, and exhausting to one (1) stack, identified as S-6.
- (hh) One (1) calcining kettle, identified as Kettle #2, with a maximum throughput of 12 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 2, and exhausting to one (1) stack, identified as S-2.
- (ii) One (1) natural gas or fuel oil-fired kettle burner, identified as Burner #2, with a heat input capacity of 12 million Btu per hour, and exhausting to one (1) stack, identified as S-42.
- (jj) One (1) hot pit, identified as Hot Pit #2, with a maximum throughput of 12 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 7, and exhausting to one (1) stack, identified as S-7.
- (kk) One (1) calcining kettle, identified as Kettle #3, with a maximum throughput of 15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 3, and exhausting to one (1) stack, identified as S-3.
- (ll) Two (2) natural gas or fuel oil-fired kettle burners, identified as Burner #3, with a combined heat input capacity of 15 million Btu per hour, and exhausting to one (1) stack, identified as S-43.
- (mm) One (1) hot pit, identified as Hot Pit #3, with a maximum throughput of 15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 8, and exhausting to one (1) stack, identified as S-8.
- (nn) One (1) calcining kettle, identified as Kettle #4, with a maximum throughput of 15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 4, and exhausting to one (1) stack, identified as S-4.
- (oo) Two (2) natural gas or fuel oil-fired kettle burners, identified as Burner #4, with a combined heat input capacity of 15 million Btu per hour, and exhausting to one (1) stack, identified as S-44.
- (pp) One (1) hot pit, identified as Hot Pit #4, with a maximum throughput of 15 tons per hour, with particulate matter emissions controlled by enclosure, and vented to Hot Pit #3.
- (qq) One (1) calcining kettle, identified as Kettle #5, with a maximum throughput of 27.5 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 5, and exhausting to one (1) stack, identified as S-5.
- (rr) One (1) natural gas or fuel oil-fired kettle burner, identified as Burner #5, with a heat input capacity of 20 million Btu per hour, and exhausting to one (1) stack, identified as S-5.
- (ss) One (1) hot pit, identified as Hot Pit #5, with a maximum throughput of 27.5 tons per hour, with particulate matter emissions controlled by enclosure, and vented to Kettle #5.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The following gypsum ore mining and storage facilities:

- (a) One (1) primary crusher, with a maximum throughput of 250 tons per hour, with particulate matter emissions uncontrolled, and exhausting inside the mine.
- (b) One (1) mine shaft conveyor, used to convey gypsum ore from the mine to the surface, with a maximum throughput of 250 tons per hour, with particulate matter emissions uncontrolled, and exhausting directly to the atmosphere.
- (c) One (1) secondary crusher, with a maximum throughput of 250 tons per hour, with particulate matter emissions controlled by partial enclosure, and exhausting inside the crusher building.
- (d) Two (2) ore storage silos, each with a capacity of 500 tons, with particulate matter emissions uncontrolled, and exhausting directly to the atmosphere.
- (e) Ore storage piles, with a storage area of 3.75 acres, with particulate matter emissions uncontrolled, and exhausting directly to the atmosphere.
- (f) One (1) synthetic gypsum storage shed, with a capacity of 0.64 acres, with particulate matter emissions controlled by partial enclosure, and exhausting directly to the atmosphere.
- (g) One (1) synthetic gypsum storage bin, with a capacity of 60 tons, with particulate matter emissions controlled by filters, and exhausting inside the storage building.
- (h) A conveying system, consisting of belt conveyors, with particulate matter emissions controlled by partial enclosure, and exhausting directly to the atmosphere.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The particulate matter emissions from the primary and secondary crushers shall not exceed 0.29 and 6.22 pounds per hour, respectively. Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

#### D.1.2 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the gypsum ore mining and storage facilities shall not exceed 61 pounds per hour when operating at a process weight rate of 250 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

**D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

**Compliance Determination Requirements**

**D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)]**

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facilities are in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.1.1 shall be determined by performance test(s) conducted in accordance with Section C - Performance Testing.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.1.5 Visible Emissions Notations**

- (a) Daily visible emission notations of the storage piles shall be performed during normal daylight operations while in operation. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**D.1.6 Record Keeping Requirements**

- (a) To document compliance with Condition D.1.4, the Permittee shall maintain records of daily visible emission notations of the storage piles.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.



## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The following bulk rock loading facilities:

- (i) A conveying system, consisting of belt conveyors, with particulate matter emissions controlled by partial or total enclosure, and exhausting to associated processes or directly to the atmosphere.
- (j) Two (2) rock ore screens, with a maximum throughput of 110 tons per hour, with particulate matter emissions controlled by partial enclosure, and exhausting directly to the atmosphere.
- (k) One (1) crusher, with a maximum throughput of 110 tons per hour, with particulate matter emissions controlled by partial enclosure, and exhausting directly to the atmosphere.
- (l) One (1) bulk rock storage silo, with a maximum capacity of 375 tons, with particulate matter emissions controlled by filters, and exhausting to the ambient air.
- (m) One (1) loading station, with a maximum throughput of 150 tons per hour, with particulate matter emissions uncontrolled, and exhausting directly to the atmosphere.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The particulate matter emissions from the screening, crushing and loading operations shall not exceed 0.147, 1.10 and 0.020 pounds per hour, respectively. Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limitations shall also satisfy the requirements of 326 IAC 6-3.

#### D.2.2 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the bulk rock loading facilities shall not exceed 55 pounds per hour when operating at a process weight rate of 150 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

#### D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

### Compliance Determination Requirements

#### D.2.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facilities are in

compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.1 shall be determined by performance test(s) conducted in accordance with Section C - Performance Testing.

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

##### **D.2.5 Visible Emissions Notations**

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- (a) Daily visible emission notations of the loadout station shall be performed during normal daylight operations while in operation. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

#### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### **D.2.6 Record Keeping Requirements**

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- (a) To document compliance with Condition D.2.4, the Permittee shall maintain records of daily visible emission notations of the loadout station.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.6

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

The following stucco production facilities:

- (z) A conveying system, consisting of screw conveyors, with particulate matter emissions controlled by partial enclosure, and exhausting to associated processes or inside the building.
- (aa) One (1) landplaster filter box, with a maximum throughput of 10 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 26, and exhausting to one (1) stack, identified as S-26.
- (bb) One (1) landplaster fines receiving system, with a maximum throughput of 6 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 48, and exhausting to one (1) stack, identified as S-52.
- (cc) Four (4) kettle feed bins, each with a capacity of 60 tons, with particulate matter uncontrolled, and exhausting inside the building.
- (dd) One (1) kettle feed bin, with a capacity of 100 tons, with particulate matter uncontrolled, and exhausting inside the building.
- (ee) One (1) calcining kettle, identified as #1 MBR Kettle, with a maximum throughput of 35.2 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 1, and exhausting to one (1) stack, identified as S-1.
- (ff) Three (3) natural gas-fired kettle burners, identified as #1 MBR Kettle Burners, each with a heat input capacity of 5 million Btu per hour, and exhausting to one (1) stack, identified as S-41.
- (gg) One (1) hot pit, identified as Hot Pit #1, with a maximum throughput of 35.2 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 6, and exhausting to one (1) stack, identified as S-6.
- (hh) One (1) calcining kettle, identified as Kettle #2, with a maximum throughput of 12 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 2, and exhausting to one (1) stack, identified as S-2.
- (ii) One (1) natural gas or fuel oil-fired kettle burner, identified as Burner #2, with a heat input capacity of 12 million Btu per hour, and exhausting to one (1) stack, identified as S-42.
- (jj) One (1) hot pit, identified as Hot Pit #2, with a maximum throughput of 12 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 7, and exhausting to one (1) stack, identified as S-7.
- (kk) One (1) calcining kettle, identified as Kettle #3, with a maximum throughput of 15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as emissions point 3, and exhausting to one (1) stack, identified as S-3.
- (ll) Two (2) natural gas or fuel oil-fired kettle burners, identified as Burner #3, with a combined heat input capacity of 15 million Btu per hour, and exhausting to one (1) stack, identified as S-43.

- (b) Pursuant to CP 101-4068, issued on January 27, 1995, the fuel oil usage for all facilities at the gypsum processing plant, including the calcining kettle burners, shall not exceed 3,000,000 gallons per 12 consecutive month period. In addition, the fuel oil shall not exceed three-tenths (0.3%) sulfur content by weight. Compliance with these limits make 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable. Compliance with these limits shall also satisfy the requirements of 326 IAC 7-1.1.

D.6.2 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the stucco production facilities shall not exceed 52.3 pounds per hour when operating at a process weight rate of 110.7 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.6.3 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitation), the SO<sub>2</sub> emissions from the kettle burners shall not exceed five-tenths (0.5) pound per million Btu.

D.6.4 New Source Performance Standard [326 IAC 12] [40CFR 60, Subpart UUU]

- (a) Pursuant to 40 CFR 60, Subpart UUU (Standards of Performance for Calciners and Dryers in Mineral Industries), the #1 MKB Calcining Kettle shall meet the following requirements:
- (1) Particulate matter (PM) emissions from the #1 MKB Calcining Kettle stack (S-1) shall not exceed 0.040 grains per standard cubic foot.
  - (2) Opacity from the #1 MKB Calcining Kettle stack (S-1) shall not exceed ten percent (10%).
  - (3) The #1 MKB Calcining Kettle shall be subject to the emission limitations set forth in this condition on or after the date of the initial performance test is completed, but no later than 180 days after the initial startup, whichever comes first.
- (b) Calcining kettles #2, #3, #4, and #5 are not subject to this rule because they were constructed and modified prior to April 23, 1986.

D.6.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

## Compliance Determination Requirements

### D.6.6 Testing Requirements [326 IAC 2-7-6(1),(6)]

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- (a) The Permittee shall conduct performance tests required by 40 CFR 60.8, and shall determine compliance according to the methods and procedures specified in 40 CFR 60.736.
- (b) Compliance testing for PM from the #1 MKB Calcining Kettle shall be performed within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed in accordance with Section C - Performance Testing and 40CFR 60.736.
- (c) The Permittee is not required to test the remaining stucco production facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facilities are in compliance. If testing is required by IDEM, compliance with the PM and SO<sub>2</sub> limits specified in Conditions D.6.1, D.6.2, D 6.3 and D.6.4 shall be determined by performance test(s) conducted in accordance with Section C - Performance Testing, and testing shall be done simultaneously at all emission points.

### D.6.7 Sulfur Dioxide Emissions and Sulfur Content

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Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed three-tenths percent (0.3%) by weight by:

- (a) Providing vendor analysis of fuel delivered, if accompanied by a certification; or
- (b) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
  - (1) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
  - (2) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

#### **D.6.8 Particulate Matter (PM)**

Pursuant to OP 51-03-85-0021, OP 51-03-85-0022, OP 51-03-85-0023, OP 51-03-85-0024, issued on June 8, 1981, and PC (51) 1596, issued on December 3, 1985, the baghouses for PM control shall be in operation at all times when the calcining kettles are in operation.

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.6.9 Visible Emissions Notations**

- (a) Daily visible emission notations of the kettle and hot pit stack exhausts (S-1 through S-8) and the filter box and landplaster bin stack exhausts (S-26 and S-52) shall be performed during normal daylight operations while in operation. Daily visible emission notations of the kettle burner stack exhausts (S-41 through S-44) shall be performed during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

#### **D.6.10 Parametric Monitoring**

The Permittee shall record the total static pressure drop across the baghouses (Pt. 1 through 8, Pt. 26 and Pt. 48) used in conjunction with the stucco production facilities, at least once daily when the associated stucco production facilities are in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 0.5 and 2.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

#### **D.6.11 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the stucco production facilities. All defective bags shall be replaced.

#### **D.6.12 Broken or Failed Bag Detection**

In the event that bag failure has been observed.

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan

shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.6.13 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.6.1(b), D.6.3 and D.6.7, the Permittee shall maintain records in accordance with (1) through (8) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the emission limit established in D.6.1(b) and D.6.3.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel oil usage since last compliance determination period;
- (3) Sulfur content and heat content;
- (4) Sulfur dioxide emission rates.
- (5) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance with the sulfur content limit, the following, as a minimum, shall be maintained:

- (6) Fuel supplier certifications;
  - (7) The name of the fuel supplier; and
  - (8) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) To document compliance with Condition D.6.9, the Permittee shall maintain records of daily visible emission notations of the stucco production stack exhausts.
  - (c) To document compliance with Condition D.6.10, the Permittee shall maintain the following:
    - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
      - (A) Inlet and outlet differential static pressure; and
      - (B) Cleaning cycle: frequency and differential pressure.

- (2) Documentation of all response steps implemented, per event.
- (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
- (4) Quality Assurance/Quality Control (QA/QC) procedures.
- (5) Operator standard operating procedures (SOP).
- (6) Manufacturer's specifications or its equivalent.
- (7) Equipment "troubleshooting" contingency plan.
- (8) Documentation of the dates vents are redirected.
- (d) To document compliance with Condition D.6.11, the Permittee shall maintain records of the results of the inspections required under Condition D.6.11.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.6.14 Reporting Requirements

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- (a) A quarterly summary of the information to document compliance with Conditions D.6.1(b) and D.6.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported.
- (b) To document compliance with Condition D.6.9, the Permittee shall certify, on the form provided, that natural gas was fired in the kettle burners #1 through #4 at all times during the report period. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during the report period. The form shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported.